## Previous Solutions

## Dynamic Directory Services

A straight-forward approach to notify users of others online is to provide dynamic directory services (DDS, see e.g. [Firefly][Mirabilis]). DDSs allow people to create so-called buddy-lists with friends or associates. The DDS server notifies each registered user when someone on their buddy-list enters the Web. DDSs give the user a glimpse of the Web's vivid nature, but they are not flexible enough to enable accidental meetings, e.g. of people who are interested in similar topics or are just at the same place at the same time. Thus one will never meet *new* partners or friends in cyberspace. Additionally, all participating users have to install special software - the DDS client.

## Static Neighborhoods and Communities

Web communities or virtual meeting rooms (VMR) provide locations where people can meet in cyberspace. A VMR typically consists of a set of Web pages. Users browsing these pages see all others browsing the pages of the same VMR. Since the set of pages of a VMR is usually static and has fixed boundaries, the users are in a static neighborhood. Unlike DDSs, static neighborhoods allow people to meet others they have never met before. The user specifies the location of the VMR and not the users themselves in buddy-lists. The VMR computes the list of neighbors.

There are many different ways to implement VMRs, from static HTML-pages and chat-rooms to complex database systems. Even dynamic directory services can be used to simulate virtual meeting rooms if the system generates the buddy-lists for all participants dynamically.

A major characteristic of VMRs is the static definition as a set of pages at a fixed location. VMRs are like real conference rooms or conference centers. People go to a certain location, and they are guaranteed to meet other persons there, providing the others entered the same VMR. All persons in the VMR are visible to each other. The visible region - the set of pages - is the same for all users of a VMR. It is defined by the configuration of the VMR. The visible region is independent from the user's actual position within the VMR.



● Web page
○ user's position
— link
▦ VMR
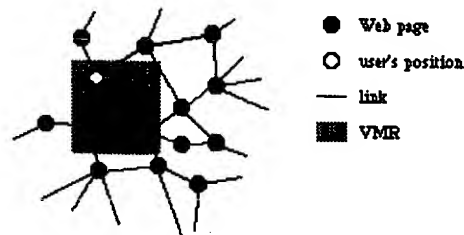
**Figure 1**: Example for a virtual meeting room composed of Web pages.

VMRs model closed rooms. This is useful for activities, which are best conducted in closed groups or closed rooms like synchronous or asynchronous collaborative work, meetings or lectures. However such a model is not suited for many other activities on the Web like browsing, window shopping, and individual hunt for information.